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Air Liquide  
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EXAMINER

DEL SOLE, JOSEPH S

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 12/04/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/733,303

Applicant(s)

MOORE, SAMUEL EARL

Examiner

Joseph S. Del Sole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of claims 1-24 in Paper No. 5 is acknowledged.
2. Claim 25 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method, there being no allowable generic or linking claim.
3. Although the claims were elected without traverse, the Applicant argued that the group was not 'independent and distinct'. The Examiner disagrees, for the reasons cited in the Office action of 9/19/02 and reiterates that "the process as claimed can be practiced by another and materially different apparatus such as an apparatus including extruders and lines/valves for delivering core and sheath materials, or an apparatus including fluid jets or a chiller (for solidifying the fibers), or an apparatus having a heater (for evaporating solvent) or an apparatus having a solvent extraction bath." The Applicant presented no further argument.

### ***Information Disclosure Statement***

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

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***Claim Objections***

5. Claims 1 and 12 are objected to because of the following informalities: **a)** claim 1 is incomplete because there is no period "." after "annular passage" in the last line; and **b)** claim 12 is incomplete because there is no period "." after "annular passage" in the last line. Appropriate correction is required.

6. Claim 24 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 5-7, 10-11, 16-18 and 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is vague and indefinite because it is unclear whether the "at least one needle" of lines 1-2 is the same needle as claimed in line 4 of claim 1.

Claim 5 is vague and indefinite because the limitation "receiving a portion of each said needle" in line 3 does not clearly recite what physical structure receives the needle. As the claim is written, either the spinneret body or the needle mounting hole may be receiving the portion.

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Claim 5 recites the limitation "said needle" in line 3. There is insufficient antecedent basis for this limitation in the claim because it is unclear if the needle referred to is the needle of claim 5, line 1 or the needle of claim 1, line 3.

Claim 6 is vague and indefinite because it is unclear whether "a bore forming fluid passage" of line 3 is the same or different from "a bore forming fluid passage" as recited in line 6 of claim 1.

Claim 7 is vague and indefinite because it is unclear whether the "bore forming fluid passage" of line 1 is the same as the passage of claim 6, line 3 or the passage of claim 1, line 6.

Claim 10 recites the limitation "the gap" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 is vague and indefinite because it is unclear whether "a sheath forming material inlet port" of line 2 is the same sheath forming material inlet port as claimed in line 14 of claim 1.

Claim 16 is vague and indefinite because it is unclear whether the "at least one needle" of lines 1-2 is the same needle as claimed in line 4 of claim 12.

Claim 16 is vague and indefinite because the limitation "receiving a portion of each said needle" in line 3 does not clearly recite what physical structure receives the needle. As the claim is written, either the spinneret body or the needle mounting hole may be receiving the portion.

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Claim 16 recites the limitation "said needle" in line 3. There is insufficient antecedent basis for this limitation in the claim because it is unclear if the needle referred to is the needle of claim 16, line 2 or the needle of claim 12, line 4.

Claim 17 is vague and indefinite because it is unclear whether "a bore forming fluid passage" of line 3 is the same or different from "a bore forming fluid passage" as recited in line 6 of claim 12.

Claim 18 is vague and indefinite because it is unclear whether the "bore forming fluid passage" of lines 1-2 is the same as the passage of claim 17, line 3 or the passage of claim 12, line 6.

Claim 21 recites the limitation "the gap" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 is vague and indefinite because it is unclear whether "a first sheath forming material inlet port" of line 2 is the same first sheath forming material inlet port as claimed in line 14 of claim 12.

Claim 23 is vague and indefinite because it is unclear whether "a second sheath forming material inlet port" of line 2 is the same second first sheath forming material inlet port as claimed in line 17 of claim 12.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore, Sr. (5,320,512).

Moore, Sr. teaches a spinnerette assembly (Fig 1) having at least one extrusion orifice (Fig 1, #26); a hollow needle (Fig 1, #18) extending through the extrusion orifice in a concentric manner to define an annular passage (Fig 1, #28) around the needle in the extrusion orifice; a bore forming fluid passage (Fig 1, #15) communicating with the interior of each needle; a core forming material passage (Fig 1, #16) formed in the spinnerette assembly, wherein each material passage has a core forming material inlet port extending from a surface of the assembly to an interior of the assembly (Fig 1, the portion in #14) and a transverse passage extending from the material port to each annular passage (Fig 1, the portion bordering #12 and #14); a sheath forming material passage (Fig 1, #25), wherein the sheath forming material passage has a sheath forming port extending from a surface of the spinneret to the annular passage (Fig 1, since the sheath forming material passage cannot originate inside of the spinneret, it must originate at the surface); the transverse portion is a backcut portion of the material passage that entirely surrounds the needle in a continuous manner and is in communication with the extrusion orifice; the material port extends substantially parallel to the extrusion orifice and the transverse passage extends substantially perpendicular to the material port (as shown by the portion of the transverse passage that follows a line between #12 and #14); the spinnerette assembly comprises a spinneret body (Fig 1, #12 and #14) and a bottom plate (Fig 1, #10) separated from each other by a shim (Fig 1, #20) disposed between the spinneret body and the bottom plate; the needle is

affixed in a needle mounting hole formed in the spinnerette body and receiving a portion of the needle (Fig 1); the needle mounting hole is in communication with the bore forming fluid inlet port at a surface of the spinnerette body via the bore forming fluid passage (Fig 1); the bore forming fluid passage has a first bore forming fluid conduit coaxial with the needle and in communication with the needle (Fig 1, the portion of the passage in the hold around the needle) and a second bore forming fluid conduit that extends at an angle with respect to the first bore forming fluid conduit from the bore forming fluid conduit to a surface of the spinnerette body (Fig 1); the extrusion orifice extends through portions of the spinnerette body and the bottom plate; the material passage is formed in the spinnerette body; and a gap (Fig 1, #30) between the spinnerette body and the bottom plate defines a portion of the sheath forming material passage.

***Claim Rejections - 35 USC § 103***

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore, Sr. (5,320,512) in view of Ando et al (3,849,044).



Moore, Sr. teaches the apparatus as discussed above in paragraph 10 of this Office action.

Moore, Sr. fails to teach the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the bottom plate.

Ando et al teach the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and the bottom plate for the purpose of forming a fiber with multi cores and a sheath using the same material for the inner core and the sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Moore, Sr. with the sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body in communication with a channel formed in the spinnerette body, the channel in communication with the gap defined between the spinnerette body and the bottom plate as taught by Ando et al because it enables the efficient, cost-saving arrangement of a single source providing the material for both the inner of two cores and a sheath.

13. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinkead (2,818,034) in view of Ando et al (3,849,044).

Kinkead teaches a spinnerette assembly (Fig 9) having at least one extrusion orifice (Fig 9, defined in part by #39); a hollow needle (Fig 9, #38) extending through the extrusion orifice in a concentric manner to define an annular passage (Fig 9) around the needle in the extrusion orifice; a bore forming fluid passage (Fig 9, #24) communicating with the interior of each needle; a core forming material passage (Fig 9, defined in part by #19) formed in the spinnerette assembly, wherein each material passage has a core forming material inlet port extending from a surface of the assembly to an interior of the assembly (Fig 9 nearest #17) and a transverse passage extending from the material port to each annular passage (Fig 9, nearest #33); the transverse portion is a backcut portion of the material passage that entirely surrounds the needle in a continuous manner and is in communication with the extrusion orifice; the material port extends substantially parallel to the extrusion orifice and the transverse passage extends substantially perpendicular to the material port; the spinnerette assembly comprises a spinneret body (Fig 9, #12) and a bottom plate (Fig 9, #11); the needle is affixed in a needle mounting hole formed in the spinnerette body and receiving a portion of the needle (Fig 9); the needle mounting hole is in communication with the bore forming fluid inlet port at a surface of the spinnerette body via the bore forming fluid passage (Fig 7, at #14); the bore forming fluid passage has a first bore forming fluid conduit coaxial with the needle and in communication with the needle (Fig 7, #24) and a second bore forming fluid conduit that extends at an angle with respect to the first bore forming fluid

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conduit from the bore forming fluid conduit to a surface of the spinnerette body (Fig 7, #25 and #26); the extrusion orifice extends through portions of the spinnerette body and the bottom plate.

Kinkead fails to teach a sheath forming material passage, wherein the sheath forming material passage has a sheath forming material port extending from a surface of the spinnerette assembly to the annular passage; the spinnerette body and the bottom plate being separated from each other by a shim disposed between the spinnerette body and the bottom plate; a gap between the spinnerette body and the bottom plate defines a portion of the sheath forming material passage; and the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the bottom plate.

Ando et al teach a sheath forming material passage (Fig 12, #8 and #7), wherein the sheath forming material passage has a sheath forming material port extending from a surface of the spinnerette (Fig 12, where 'B' is supplied) to each annular passage (Fig 12, at #11 and #12); the spinnerette body (Fig 12) is separated from the bottom plate (Fig 12, #16) by a shim (Fig 12, #15) disposed between the spinnerette body and the bottom plate; a gap (Fig 12, partially filled by #8) between the spinnerette body and the bottom plate defines a portion of the sheath forming material passage; and the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in

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communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and the bottom plate for the purpose of forming a fiber with multi cores and a sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Kinkead with the sheath-related structures as taught by Ando et al because these sheath-related structures would enable a product to be formed having a double core with a sheath surrounding the double cores.

14. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinkead (2,818,034) in view of Goffe (4,493,629).

Kinkead teaches a spinnerette assembly (Fig 9) having at least one extrusion orifice (Fig 9, defined in part by #39); a hollow needle (Fig 9, #38) extending through the extrusion orifice in a concentric manner to define an annular passage (Fig 9) around the needle in the extrusion orifice; a bore forming fluid passage (Fig 9, #24) communicating with the interior of each needle; a core forming material passage (Fig 9, defined in part by #19) formed in the spinnerette assembly, wherein each material passage has a core forming material inlet port extending from a surface of the assembly to an interior of the assembly (Fig 9 nearest #17) and a transverse passage extending from the material port to each annular passage (Fig 9, nearest #33); the transverse portion is a backcut portion of the material passage that entirely surrounds the needle in a continuous manner and is in communication with the extrusion orifice; the material port extends substantially parallel to the extrusion orifice and the transverse passage extends

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substantially perpendicular to the material port; the spinnerette assembly comprises a spinneret body (Fig 9, #12) and a bottom plate (Fig 9, #11); the needle is affixed in a needle mounting hole formed in the spinnerette body and receiving a portion of the needle (Fig 9); the needle mounting hole is in communication with the bore forming fluid inlet port at a surface of the spinnerette body via the bore forming fluid passage (Fig 7, at #14); the bore forming fluid passage has a first bore forming fluid conduit coaxial with the needle and in communication with the needle (Fig 7, #24) and a second bore forming fluid conduit that extends at an angle with respect to the first bore forming fluid conduit from the bore forming fluid conduit to a surface of the spinnerette body (Fig 7, #25 and #26); the extrusion orifice extends through portions of the spinnerette body and the bottom plate.

Kinkead fails to teach a sheath forming material passage, wherein the sheath forming material passage has a sheath forming material port extending from a surface of the spinnerette assembly to the annular passage; the spinnerette body and the bottom plate being separated from each other by a shim disposed between the spinnerette body and the bottom plate; a gap between the spinnerette body and the bottom plate defines a portion of the sheath forming material passage; and the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the bottom plate.

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Goffe teaches a sheath forming material passage (Fig 4, #42), wherein the sheath forming material passage has a sheath forming material port extending from a surface of the spinnerette (col 2, lines 51-57) to each annular passage (Fig 4); the spinnerette body (Fig 4, #12) is separated from the bottom plate (Fig 4, #11) by a shim (Fig 4, #40) disposed between the spinnerette body and the bottom plate; a gap (Fig 4, at #42) between the spinnerette body and the bottom plate defines a portion of the sheath forming material passage for the purpose of forming a hollow fiber with concentric layers of different materials (col 2, lines 56-59).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Kinkead with the sheath-related structures as taught by Goffe because these sheath-related structures would enable a hollow fiber to be formed having a core and a sheath.

15. Claims 12-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore, Sr. (5,320,512).

Moore, Sr. teaches the limitations of the apparatus of claims 12-21 and 23 as discussed above in the rejection of claims 1-10 as anticipated by Moore, Sr. (in paragraph 10 of this Office action) as far as those limitations that are duplicated in both sets of claims. Moore, Sr. further teaches sheath forming material passage having a sheath forming material inlet port situated at an exterior surface of the bottom plate (Fig 1, #25) in communication with a channel formed in the bottom plate, the channel being in communication with the gap defined between the bottom plate and the plate above it.

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Moore, Sr. fails to teach a second sheath forming material passage, wherein the second sheath forming material passage has a second sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a middle plate between the spinnerette body and the bottom plate; a first shim between the spinnerette body and the middle plate and a second shim between the middle plate and the bottom plate; the gap between the spinnerette body and the middle plate defining a portion of the first sheath forming material passage; a gap between a middle plate and the bottom plate defining a portion of the second sheath forming material passage.

Regarding claims 12-21 and 23, the mere duplication of parts, in this instance having a second sheath forming material passage, a middle plate and a second shim, has no patentable significance unless new and unexpected results are produced. In re Harza, 124 USPQ 378 (CCPA 1960). The added limitations merely duplicate the sheath forming structures already taught by Moore, Sr. for the purpose of forming a fiber with an additional core, this is an obvious modification. Likewise, had the Applicant claimed third, fourth, fifth and sixth sheath forming material passages it would not have been necessary to find these in the prior art.

16. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore, Sr. (5,320,512) in view of Ando et al (3,849,044).

Moore, Sr. teaches the apparatus as discussed above in paragraph 15 of this Office action.

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Moore, Sr. fails to teach the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the plate below it.

Ando et al teach the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and a bottom plate (the plate below it) for the purpose of forming a fiber with multi cores and a sheath using the same material for the inner core and the sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Moore, Sr. with the sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body in communication with a channel formed in the spinnerette body, the channel in communication with the gap defined between the spinnerette body and the bottom plate because it enables the efficient, cost-saving arrangement of a single source providing the material for both the inner of two cores and a sheath.

17. Claims 12-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinhead (2,818,034) in view of Goffe (4,493,629).



Kinkead and Goffe teach the limitations of the apparatus of claims 12-21 and 23 as discussed above in the rejection of claims 1-10 as taught by Kinkead in view of Goffe (in paragraph 14 of this Office action) as far as those limitations that are duplicated in both sets of claims. For the purpose stated previously, Goffe also teaches a sheath forming material port situated in an exterior surface of the bottom plate in communication with a channel formed in the bottom plate and in communication with the bottom plate and the plate above it.

Kinkead fails to teach a second sheath forming material passage, wherein the second sheath forming material passage has a second sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a middle plate between the spinnerette body and the bottom plate; a first shim between the spinnerette body and the middle plate and a second shim between the middle plate and the bottom plate; the gap between the spinnerette body and the middle plate defining a portion of the first sheath forming material passage; a gap between a middle plate and the bottom plate defining a portion of the second sheath forming material passage.

Regarding claims 12-21 and 23, the mere duplication of parts, in this instance having a second sheath forming material passage, a middle plate and a second shim, has no patentable significance unless new and unexpected results are produced. In re Harza, 124 USPQ 378 (CCPA 1960). The added limitations merely duplicate the sheath forming structures already taught by Kinkead in view of Goffe for the purpose of forming a fiber with an additional core, this is an obvious modification. Likewise, had

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the Applicant claimed third, fourth, fifth and sixth sheath forming material passages it would not have been necessary to find these in the prior art.

18. Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinkead (2,818,034) in view of Ando et al (3,849,044).

Kinkead and Ando et al teach the limitations of the apparatus of claims 12-22 as discussed above in the rejection of claims 1-11 as taught by Kinkead in view of Ando et al (in paragraph 13 of this Office action) as far as those limitations that are duplicated in both sets of claims.

Kinkead fails to teach a second sheath forming material passage, wherein the second sheath forming material passage has a second sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a middle plate between the spinnerette body and the bottom plate; a first shim between the spinnerette body and the middle plate and a second shim between the middle plate and the bottom plate; the gap between the spinnerette body and the middle plate defining a portion of the first sheath forming material passage; a gap between a middle plate and the bottom plate defining a portion of the second sheath forming material passage.

Regarding claims 12-22, the mere duplication of parts, in this instance having a second sheath forming material passage, a middle plate and a second shim, has no patentable significance unless new and unexpected results are produced. In re Harza, 124 USPQ 378 (CCPA 1960). The added limitations merely duplicate the sheath forming structures already taught by Kinkead in view of Ando et al for the purpose of

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forming a fiber with an additional core, this is an obvious modification. Likewise, had the Applicant claimed third, fourth, fifth and sixth sheath forming material passages it would not have been necessary to find these in the prior art.

### ***Double Patenting***

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

20. Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 09/733,304 in view of Moore, Sr. (5,320,512).

Claims 1-10 of 09/733,304 teach the limitations of the apparatus of current claims 1-10 as far as those limitations that are duplicated in both sets of claims.

Claims 1-10 of 09/733,304 fail to teach a sheath forming material passage, wherein the sheath forming material passage has a sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a shim between the spinnerette body and the bottom plate; and a gap between the spinnerette body and the bottom plate defining a portion of the sheath forming material passage.

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Moore, Sr. teaches a sheath forming material passage (Fig 1, #25), wherein the sheath forming material passage has a sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a shim (Fig 1, #20) between the spinnerette body and the bottom plate; and a gap (Fig 1, #30) between the spinnerette body and the bottom plate defining a portion of the sheath forming material passage for the purpose of forming a hollow fiber with a sheath and a core (col 2, lines 25-39).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of claims 1-10 of 09/733,304 with the sheath structures as taught by Moore, Sr. because it enables a hollow fiber to be formed that has a multicomponent sheath and core.

This is a provisional obviousness-type double patenting rejection.

21. Claim 11 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 09/733,304 in view of Moore, Sr. (5,320,512) and further in view of Ando et al (3,849,044).

Claims 1-10 of 09/733,304 and Moore, Sr. teach the apparatus as discussed above in paragraph 20 of this Office action.

Claims 1-10 of 09/733,304 fail to teach the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel

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being in communication with the gap defined between the spinnerette body and the bottom plate.

Ando et al teach the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and the bottom plate for the purpose of forming a fiber with multi cores and a sheath using the same material for the inner core and the sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Claims 1-10 of 09/733,304 with the sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body in communication with a channel formed in the spinnerette body, the channel in communication with the gap defined between the spinnerette body and the bottom plate as taught by Ando et al because it enables the efficient, cost-saving arrangement of a single source providing the material for both the inner of two cores and a sheath.

This is a provisional obviousness-type double patenting rejection.

22. Claims 12-21 and 23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 09/733,304 in view of Moore, Sr. (5,320,512).

Claims 1-10 of 09/733,304 and Moore, Sr. teach most of the limitations of the apparatus of claims 12-21 as discussed above in the rejection of claims 1-10 over

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claims 1-10 of 09/733,304 in view of Moore, Sr. (paragraph 20 of this Office action) as far as those limitations that are duplicated in both sets of claims. Moore, Sr. further teaches sheath forming material passage having a sheath forming material inlet port situated at an exterior surface of the bottom plate (Fig 1, #25) in communication with a channel formed in the bottom plate, the channel being in communication with the gap defined between the bottom plate and the plate above it.

Claims 1-10 of 09/733,304 fail to teach a second sheath forming material passage, wherein the second sheath forming material passage has a second sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a middle plate between the spinnerette body and the bottom plate; a first shim between the spinnerette body and the middle plate and a second shim between the middle plate and the bottom plate; the gap between the spinnerette body and the middle plate defining a portion of the first sheath forming material passage; a gap between a middle plate and the bottom plate defining a portion of the second sheath forming material passage.

Regarding claims 12-21 and 23, the mere duplication of parts, in this instance having a second sheath forming material passage, a middle plate and a second shim, has no patentable significance unless new and unexpected results are produced. In re Harza, 124 USPQ 378 (CCPA 1960). The added limitations merely duplicate the sheath forming structures already taught by Moore, Sr. for the purpose of forming a fiber with an additional core, this is an obvious modification. Likewise, had the Applicant

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claimed third, fourth, fifth and sixth sheath forming material passages it would not have been necessary to find these in the prior art.

This is a provisional obviousness-type double patenting rejection.

23. Claim 22 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 09/733,304 in view of Moore, Sr. (5,320,512) and further in view of Ando et al (3,849,044).

Claims 1-10 of 09/733,304 and Moore, Sr. teach the apparatus as discussed above in paragraph 22 of this Office action.

Claims 1-10 of 09/733,304 fail to teach the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the bottom plate.

Ando et al teach the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and the bottom plate for the purpose of forming a fiber with multi cores and a sheath using the same material for the inner core and the sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Claims 1-10 of 09/733,304

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with the sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body in communication with a channel formed in the spinnerette body, the channel in communication with the gap defined between the spinnerette body and the bottom plate as taught by Ando et al because it enables the efficient, cost-saving arrangement of a single source providing the material for both the inner of two cores and a sheath.

This is a provisional obviousness-type double patenting rejection.

### ***References of Interest***

24. Ogata (3,526,571) is cited of interest to show the state of the art including the use of multiple traverse passages and extrusion orifices for a single core forming material port, this being the limitation improperly claimed in claim 24.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (703) 308-6295. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

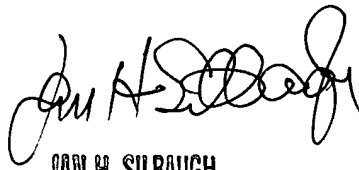
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jan Silbaugh, can be reached at (703) 308-3829. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for non-after finals and (703) 872-9311 for after finals.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Joseph S Del Sole

J.S.D.

November 27, 2002

  
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SUPERVISORY PATENT EXAMINER  
ART UNIT ~~172~~ 1722

12/02/02